

Application No.: 10/713,170

Docket No.: 324758013US

Proposed Amendments to the Claims:

Please cancel claim 30, and please amend claims 31-36, 40, 43, 44, 46, 47 and 57 as follows. Following is a complete listing of the claims pending in the application, as amended:

1. – 29. (Cancelled)

30. (Cancelled)

31. (Currently Amended) The connector assembly of claim ~~30-40~~ wherein at least one of the first connector support and the second connector support is movable relative to the other one of the first connector support and the second connector support to at least approximately concurrently engage the plurality of first contacts with the plurality of second contacts.

32. (Currently Amended) The connector assembly of claim ~~30-40~~ wherein the plurality of first connector sets are movably mounted to the first connector support to move independently from each other in at least one direction relative to the connector support.

33. (Currently Amended) The connector assembly of claim ~~30-40~~ wherein the first connector unit further includes at least a first alignment feature and the second connector unit further includes at least a corresponding second alignment feature configured to align the plurality of first connector sets with the plurality of second connector sets.

34. (Currently Amended) The connector assembly of claim ~~30-40~~ wherein the second connector unit further includes at least one guide pin and the first connector unit further includes at least one corresponding guide pin bore configured to receive the guide

Application No.: 10/713,170

Docket No.: 324758013US

pin to align at least one of the plurality of first connector sets with a corresponding one of the plurality of second connector sets.

35. (Currently Amended) The connector assembly of claim ~~30-40~~ wherein:
the first connector unit further includes a first primary alignment feature and a first secondary alignment feature; and
the second connector unit further includes a second primary alignment feature and a second secondary alignment feature, wherein-
the first primary alignment feature of the first connector unit is configured to cooperate with the second primary alignment feature of the second connector unit to provide a first stage of alignment between the first contacts and the corresponding second contacts, and
the first secondary alignment feature of the first connector unit is configured to cooperate with the second secondary alignment feature of the second connector unit to provide a second stage of alignment between the first contacts and the corresponding second contacts, the second stage of alignment being closer than the first stage of alignment.

36. (Currently Amended) The connector assembly of claim ~~30-40~~ wherein:
the first connector unit further includes a primary guide pin bore and a secondary guide pin bore; and
the second connector unit further includes a primary guide pin and a secondary guide pin, wherein-
the primary guide pin bore of the first connector unit is configured to receive the primary guide pin of the second connector unit to provide a first stage of alignment between the plurality of first contacts and the corresponding second contacts, and
the secondary guide pin bore of the first connector unit is configured to receive the secondary guide pin of the second connector unit to provide a second stage

Application No.: 10/713,170

Docket No.: 324758013US

of alignment between the plurality of first contacts and the corresponding second contacts, the second stage of alignment being closer than the first stage of alignment.

37. (Original) The connector assembly of claim 36 wherein at least one of the first connector sets further includes a connector back-shell and a contact array frame, wherein the contact array frame carries the plurality of first contacts in the connector back-shell, and wherein the connector back-shell includes the primary guide pin bore and the contact array frame includes the secondary guide pin bore.

38. (Original) The connector assembly of claim 36 wherein at least one of the first connector sets further includes a connector back-shell and a contact array frame, wherein the contact array frame carries the plurality of first contacts in the connector back-shell and is free to move small distances relative to the connector back-shell, and wherein the connector back-shell includes the primary guide pin bore and the contact array frame includes the secondary guide pin bore.

Application No.: 10/713,170

Docket No.: 324758013US

39. (Original) The connector assembly of claim 36 wherein at least one of the first connector sets further includes a connector back-shell and a contact array frame, wherein the contact array frame carries the plurality of first contacts in the connector back-shell and individual first contacts are free to move small distances relative to each other in the contact array frame, and wherein the connector back-shell includes the primary guide pin bore and the contact array frame includes the secondary guide pin bore.

40. (Currently Amended) The connector assembly of claim 30A connector assembly for operatively connecting a first bank of processors to a second bank of processors, the connector assembly comprising:

a first connector unit having a first connector support and a plurality of first connector sets mounted to the first connector support, wherein individual first connector sets include a plurality of first contacts; and

a second connector unit having a second connector support and a plurality of second connector sets mounted to the second connector support, wherein individual second connector sets include a plurality of second contacts, wherein at least one of the first connector unit and the second connector unit is movable relative to the other one of the first connector unit and the second connector unit to engage the plurality of first connector sets with the plurality of second connector sets at least approximately concurrently, and wherein at least one of the first connector unit and the second connector unit is carried by at least one extendable member mechanism that extends and retracts to accommodates movement of the at least one connector unit relative to the other one of the connector units.

41. (Currently Amended) The connector assembly of claim ~~30~~40 wherein at least one of the first connector unit and the second connector unit further includes at least one cam follower, and wherein the other of the first and second connector units further includes at least one cam surface configured to cooperate with the cam follower to drive

Application No.: 10/713,170

Docket No.: 324758013US

the first and second connector units together to releasably engage the plurality of first connector sets with the plurality of second connector sets.

42. (Original) The connector assembly of claim 41 wherein the at least one cam follower is rotatably mounted to the at least one of the first connector unit and the second connector unit.

43. (Currently Amended) The connector assembly of claim ~~30~~40 wherein at least one of the first connector unit and the second connector unit includes a blocking member that retractably extends into the path of the other of the first connector unit and the second connector unit to block the plurality of first connector sets from inadvertently contacting the corresponding second connector sets.

44. (Currently Amended) The connector assembly of claim ~~30~~40, further comprising:

a plurality of cables operatively connected to corresponding first connector sets; and
a cable manager supported by the plurality of cables and spaced apart from the first connector support, wherein the cable manager positions the plurality of cables relative to each other and reduces strain on the first connector sets from cable loads.

45. (Original) The connector assembly of claim 44, further comprising a plurality of flexible grommets carried by the cable manager, wherein individual flexible grommets flexibly support individual cables passing through the cable manager.

46. (Currently Amended) The connector assembly of claim ~~30~~40 wherein at least one of the first connector unit and the second connector unit further includes a plurality of contact retainers, wherein the contact retainers removably attach individual sets

Application No.: 10/713,170

Docket No.: 324758013US

of contacts to the respective connector support and facilitate replacement of the individual sets of contacts for individual connector sets.

47. (Currently Amended) A connector assembly for operatively connecting a first bank of processors to a second bank of processors, the connector assembly comprising:

a first connector unit including a plurality of individual first connector sets that include a plurality of first contacts operatively connectable to the first bank of processors, wherein the first connector unit further includes at least a first primary alignment feature;

a second connector unit including a plurality of second connector sets that include a plurality of second contacts operatively connectable to the second bank of processors, wherein the second connector unit further includes at least a second primary alignment feature configured to cooperate with the first primary alignment feature to align the plurality of first contacts with the plurality of second contacts; and

a movable guide structure carrying at least one of the first and second connector units, wherein the movable guide structure extends and retracts to accommodate movement of at least one of the first and second connector units ~~is movable~~ relative to the other one of the first and second connector units ~~via the guide structure~~ to releasably engage the plurality of first contacts with the plurality of second contacts.

48. (Original) The connector assembly of claim 47 wherein the first connector unit is movable between a retracted position spaced apart from the second connector unit and an engaged position in which the plurality of first contacts are engaged with the plurality of second contacts, and wherein the movable guide structure includes at least one extendible tube assembly configured to support the first connector unit and span the distance between the retracted position and the engaged position.

Application No.: 10/713,170

Docket No.: 324758013US

49. (Original) The connector assembly of claim 47 wherein the first primary alignment feature is a guide pin bore and the second primary alignment feature is a corresponding guide pin.

50. (Original) The connector assembly of claim 47 wherein:
the first connector unit further includes a first secondary alignment feature; and
the second connector unit further includes a second secondary alignment feature,
wherein-
the first primary alignment feature of the first connector unit is configured to cooperate with the second primary alignment feature of the second connector unit to provide a first stage of alignment between the first contacts and the corresponding second contacts, and
the first secondary alignment feature of the first connector unit is configured to cooperate with the second secondary alignment feature of the second connector unit to provide a second stage of alignment between the first contacts and the corresponding second contacts, the second stage of alignment being closer than the first stage of alignment.

51. (Original) The connector assembly of claim 47 wherein:
the first primary alignment feature is a primary guide pin bore and the first connector unit further includes a secondary guide pin bore; and
the second primary alignment feature is a primary guide pin and the second connector unit further includes a secondary guide pin, wherein-
the primary guide pin bore of the first connector unit is configured to receive the primary guide pin of the second connector unit to provide a first stage of alignment between the plurality of first contacts and the corresponding second contacts, and
the secondary guide pin bore of the first connector unit is configured to receive the secondary guide pin of the second connector unit to provide a second stage

Application No.: 10/713,170

Docket No.: 324758013US

of alignment between the plurality of first contacts and the corresponding second contacts, the second stage of alignment being closer than the first stage of alignment.

52. (Original) The connector assembly of claim 51 wherein at least one of the first connector sets further includes a connector back-shell and a contact array frame, wherein the contact array frame carries the plurality of first contacts in the connector back-shell, and wherein the connector back-shell includes the primary guide pin bore and the contact array frame includes the secondary guide pin bore.

53. (Original) The connector assembly of claim 51 wherein at least one of the first connector sets further includes a connector back-shell and a contact array frame, wherein the contact array frame carries the plurality of first contacts in the connector back-shell, wherein the connector back-shell is free to move in at least one direction relative to the first connector unit, and wherein the connector back-shell includes the primary guide pin bore and the contact array frame includes the secondary guide pin bore.

54. (Original) The connector assembly of claim 51 wherein at least one of the first connector sets further includes a connector back-shell and a contact array frame, wherein the contact array frame carries the plurality of first contacts in the connector back-shell and is free to move in at least one direction relative to the connector back-shell, and wherein the connector back-shell includes the primary guide pin bore and the contact array frame includes the secondary guide pin bore.

55. (Original) The connector assembly of claim 51 wherein at least one of the first connector sets further includes a connector back-shell and a contact array frame, wherein the contact array frame carries the plurality of first contacts in the connector back-shell and individual first contacts are free to move in at least one direction relative to each

Application No.: 10/713,170

Docket No.: 324758013US

other in the contact array frame, and wherein the connector back-shell includes the primary guide pin bore and the contact array frame includes the secondary guide pin bore.

56. (Original) The connector assembly of claim 47, further comprising a drive assembly operably coupled to at least one of the first connector unit and the second connector unit, wherein the drive assembly is configured to drive at least one of the first and second connector units toward the other one of the first and second connector units to releasably engage the plurality of first contacts with the plurality of second contacts.

57. (Currently Amended) A system for operably connecting a first bank of processors to a second bank of processors, the system comprising:

means for at least approximately concurrently aligning a plurality of first connector sets with a plurality of corresponding second connector sets; and

means for at least approximately concurrently engaging the first connector sets with the second connector sets to operably connect the first bank of processors to the second bank of processors, wherein at least one of the first connector sets and the second connector sets is carried by an extendable mechanism that extends to engage the first connector sets with the second connector sets and retracts to disengage the first connector sets with the second connector sets.

58. (Original) The system of claim 57 wherein individual first connector sets include a plurality of first contacts operatively connected to the first bank of processors, wherein individual second connector sets include a plurality of second contacts operatively connected to the second bank of processors, and wherein the means for at least approximately concurrently engaging the plurality of first connector sets with the plurality of second connector sets includes means for engaging the plurality of first contacts with the plurality of second contacts.

Application No.: 10/713,170

Docket No.: 324758013US

59. (Original) The system of claim 57 wherein the means for at least approximately concurrently engaging the plurality of first connector sets with the plurality of second connector sets includes means for manually driving the plurality of first connector sets at least approximately concurrently toward the plurality of second connector sets.

60. (Original) The system of claim 57 wherein the means for at least approximately concurrently engaging the plurality of first connector sets with the plurality of second connector sets includes means for mechanically driving the plurality of first connector sets at least approximately concurrently toward the plurality of second connector sets.

61. (Original) The system of claim 57 wherein the means for at least approximately concurrently aligning the plurality of first connector sets with the plurality of second connector sets includes means for receiving at least a first alignment pin in a corresponding first pin bore.

62. (Original) The system of claim 57 wherein the means for at least approximately concurrently engaging the plurality of first connector sets with the plurality of second connector sets includes means for operatively connecting a first bank of processors to a second bank of processors.

63. (Original) The system of claim 57 wherein the means for at least approximately concurrently engaging the plurality of first connector sets with the plurality of second connector sets includes means for simultaneously engaging the plurality of first connector sets with the plurality of second connector sets.

64. (Original) The system of claim 57 wherein the means for at least approximately concurrently aligning the plurality of first connector sets with the plurality of second connector sets includes means for at least approximately concurrently aligning a

Application No.: 10/713,170

Docket No.: 324758013US

first connector support relative to a corresponding second connector support, wherein the first connector sets are mounted to the first connector support and the second connector sets are mounted to the second connector support.

65. (Original) The system of claim 57 wherein the plurality of first connector sets are carried by a first connector support and the plurality of second connector sets are carried by a corresponding second connector support, and wherein the means for at least approximately concurrently aligning a plurality of first connector sets with a plurality of corresponding second connector sets includes:

means for achieving a first level of alignment by aligning the first connector support relative to the second connector support; and

means for achieving a second level of alignment by aligning individual first connector sets relative to corresponding second connector sets, wherein the second level of alignment is closer than the first level of alignment.

66. (Original) The system of claim 57 wherein the plurality of first connector sets are carried by a first connector support and the plurality of second connector sets are carried by a corresponding second connector support, wherein individual first connector sets include first connector back-shells and first contact array frames carried by the first connector back-shells, wherein corresponding second connector sets include corresponding second connector back-shells and second contact array frames carried by the second connector back-shells, and wherein the means for at least approximately concurrently aligning the plurality of first connector sets with corresponding second connector sets includes:

means for achieving a first level of alignment by aligning the first connector support relative to the second connector support;

means for achieving a second level of alignment by aligning individual first connector back-shells relative to corresponding second connector back-

Application No.: 10/713,170

Docket No.: 324758013US

shells, wherein the second level of alignment is closer than the first level of alignment; and

means for achieving a third level of alignment by aligning individual first contact array frames relative to corresponding second contact array frames, wherein the third level of alignment is closer than the second level of alignment.

67. – 89. (Cancelled)

Steve Arnett

Oct, 28, 2005